CYBERPATH: CRITICAL THINKING CASE-BASED PATHOPHYSIOLOGY

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CyberPath, an innovative, student-controlled online tutorial, uses a case-based, interactive framework to present principles of pathophysiology. Traditionally, health science students have attempted to master this difficult content in a rote fashion from textbooks, quiz sections, and other faculty-directed methods of presentation.

Using ***CyberPath,*** the learner engages in critical and analytical thinking in the context of learning pathophysiology. Learning becomes reality-based and interactive in this framework. The case-based methodology provides the learner with an organizing conceptual framework and a way to ask questions while making critical connections about the content. The tutorial was developed for multiple formats (hard and floppy disks, CD-ROM, and WWW). The selected programming language allows a variety of interactive applications to be included, (for instance, Java applets). These dynamic and interactive applets run inside Web pages displayed by a Java-capable browser such as HotJava, Netscape 2.0, or Microsoft Explorer.

The intentional design of the cases with the related links prompts the learner to practice critical thinking. The learner will actively engage in the case by discovery, exploration, and questioning.

These pathways will improve retention of fundamental principles of pathophysiology. The format for each section will include audio, still images, and video. Text summaries will be embedded in the audio portions and visual displays to enhance learner retention.

For each case there will be a glossary of terms, an interactive atlas, and a pull down window with a dialog box for questions that can occur between the learner and other learners, and between the learner and the faculty facilitator. Rotating 3D models of the respiratory system (mouse-controlled), crossword puzzles for mastery of essential terminology, pop-up labels on images, quizzes with immediate feedback, and a horizontally scrolling video of the case with an audio introduction will be incorporated, as well.

The selection for the electronic poster presentation will illustrate the respiratory system. The final product will represent all physiologic systems as well as special topics, e.g., application of immune physiology to selected pathophysiologic processes. A review of the effectiveness of this format will be described during the presentation.

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